

# NATURAL HISTORY MISCELLANEA

Published by  
The Chicago Academy of Sciences  
Lincoln Park - 2001 N. Clark St., Chicago 14, Illinois

---

No. 106

May 9, 1952

---

## Some Records and Descriptions of Polydesmoid Millipeds from the United States Nell B. Causey\*

The types of the millipeds described in this paper will be deposited in the American Museum of Natural History. Illinois specimens were collected by members of the Section of Faunistic Surveys and Insect Identification of the Illinois Natural History Survey and are part of the permanent collection at Urbana. Oklahoma records are in part from the permanent collection of the University of Oklahoma and in part from the author's personal collection. Other specimens are in the author's collection and, unless a collector is mentioned, were collected with the assistance of Dr. David Causey.

Order POLYDESMOIDEA  
Suborder STRONGYLOSOMIDEA  
Family EURYMERODESMIDAE

The constriction of the anterior margin of the gonopodal opening and the absence of a definite boundary between the prefemur and the acropodite of the male gonopods distinguish Family Eurymerodesmidae from Family Strongylosomidae, in which the gonopodal opening is constricted medially on both the anterior and posterior margins and there is a definite boundary between the prefemur and the acropodite.

Genus *Eurymerodesmus* Brölemann  
*Eurymerodesmus birdi*

*Chamberlin, 1931, Ent. News, vol. 60, p. 101, fig. 6-8.*

Originally described from Murray Co., Oklahoma, this species has since been collected in Seminole, Pittsburg, and Hughes Counties. In Arkansas

\*Fayetteville, Arkansas.

it has been collected in Sebastin, Logan, and Miller Counties, where it tends to approach *E. schmidtii* in the size of the lobes on the gonopodal opening. Arkansas specimens are about 1.5 mm. wider than those from Murray Co., Oklahoma.

***Eurymerodesmus schmidtii***

Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 38, fig. 7. *E. plishneri* Causey, 1950, Ohio Journ. Sci., vol. 50, no. 6, p. 271, fig. 8.

Specimens collected in Polk Co., Arkansas, are 1.5 to 2 mm. wider than those from Crawford, Washington, Franklin, and Benton Counties. Long straight setae are on the entire margin of the gonopodal opening and on the lobes. The lobes are triangular, on the posterior margin of the opening, and seldom more than half as long as the coxae of the ninth legs, although the setae on them may extend beyond the coxae. In specimens of *E. birdi* from the type locality, the lobes are longer, wider, roughly rounded or angular, and the setae on the ventral margin are shorter than in *E. schmidtii*.

***Eurymerodesmus mundus***

Chamberlin, 1931, Ent. News, vol. 60, p. 102, fig. 3-5.

This species, originally described from Norman, Cleveland Co., Oklahoma, has since been collected in Latimer, Caddo, and McClain Counties. In Arkansas it has been taken only in Sevier Co.

***Eurymerodesmus spectabilis***

Causey, 1950, Ohio Journ. Sci., vol. 50, no. 6, **p.** 270, fig. 6, 7.

First collected in Columbia Co., Arkansas, this species has since been taken in Claiborne Parish, Louisiana, and in Union Co., Arkansas.

***Eurymerodesmus dubius***

Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 38, fig. 8.

First collected at Delight, Pike Co., Arkansas, this species has recently been collected at other sites in Pike Co. and in the following other counties: Clark, Dallas, Hot Springs, Saline, and Sevier.

The width of males varies from 7 to 5.4 mm., females from 5.5 to 4.6 mm. In all collections the gonopods are uniform in appearance, with the cephalic surface of the telopodite almost free of setae except for the subterminal row of about 12; the caudal surface of the telopodite, which is the view illustrated by Chamberlin, has the usual two more or less irregular rows

of setae. Laterad the margin of the gonopodal opening rises to a point so small that it is scarcely perceptible in some specimens. The lobes are sparsely setose on the margins and laterad; anterior and posterior margins of the opening are free of setae. Some males have a distinct perpendicular ridge or keel on the posterior wall of the gonopodal opening; in others only a trace of the keel is present, and in some there is no indication of a keel; this character may vary within a single collection. Another variable character is the shape of the sternum between the ninth legs. In some males it is in the form of two setose lobes, with the excavation between them narrow; in some it is flat and setose; in others it takes the form of a single medial setose tuberosity. No correlation was found between the occurrence of these two variable characters.

*Eurymerodesmus goodi*, new species

Figure 1

In size and lateral margins of gonopodal opening similar to *E. dubius*; distinguished from that species by the shape of the gonopods, the distribution of setae on them, and the caudal extension of the gonopodal opening over the sternum of the ninth legs. Gonopods nearest those of *E. angularis* Causey 1951; differs from that species in its larger size and simpler margins of gonopodal opening.

*Male holotype.* Color incompletely developed; prozonites dark olive; metazonites light olive with middorsal black line; keels with the usual red-orange lateral margins. With the usual outer mandibular processes, tubercles on coxae of second legs, the pair of small setose processes on sterna of legs 4 through 7, and the small setose mounds on the sterna of legs 9 through 28.

Medial constriction of anterior margin of gonopodal opening rounded; posteriorly the gonopodal opening extends back over the sternum of the ninth legs and laterad it extends to the coxae. Margin almost horizontal laterad, with but a slight indication of a triangular lobe near the coxae. Margin sparsely setose laterad, free of setae in front and behind. Wrinkled triangular area on pleurite above and contiguous with lateral margins.

Telopodite of gonopods short, slender, and lying entirely within gonopodal cavity. Distal half entirely glabrous, reduced, and curved (Fig. 1), but not abruptly bent as in *angularis*. About the middle of its length, mesad and ectad, are two rows of 10 or 12 stout setae, the setae as long as the glabrous region; a third row of long but finer and more numerous setae is on

the dorsal surface; the prefemoral region bears the usual numerous long setae laterad. *In situ* the telopodites cross in the midline.

*Length* 46 mm., *width* 5.8 mm.

*Type locality.* Sixteen miles southeast of Mena on Bard Springs Road, Polk Co., Arkansas; one male Sept. 7, 1950. It is a pleasure to name this species for W. J. Good, whose assistance made the collection possible.

*Eurymerodesmus amplus*, new species

Figure 3

A species with attenuated, curved telopodites similar to those of several other species; near *E. hispidipes* (Wood, 1865) in the shape of the lobes on the gonopodal opening; distinguished from that species by the shape of the gonopodal opening, which is abruptly widened distolaterad.

*Male holotype.* Dorsum dark, the exact color unknown; keels red-orange laterad; uninterrupted black middorsal line. Posterior angles of keels 16 through 19 acute. Outer mandibular processes, coxae of second legs, sterna between legs 4 through 28 similar or very near those characters in *hispidipes* (Causey 1950, p. 268).

Lobes of gonopodal opening quadrate, distolaterad in position, slightly lower and less setose than in *hispidipes*; they turn laterad, then mesad and end abruptly at the base of the coxae. Anterior margin of opening and margins of lobes sparsely setose; lobes thickly setose on medial surface, but the setae are not as abundant or as long as in *hispidipes*; posterior margin glabrous. Laterad the lobes and the adjacent pleurites are finely wrinkled in a triangular area that has its apex on the transverse suture. Distolaterad the gonopodal opening is irregular (Fig. 3), its outline corresponding almost with that of the margins of the lobes; in *hispidipes* (Fig. 2) the opening is broadly rounded distolaterad.

*Length* about 31 mm., *width* 4.4 mm.

*Type locality.* Ruston, Lincoln Parish, Louisiana; one male and one female; November, 1951; Walter J. Harmon.

*Female allotype.* Sterna almost glabrous; length 26.5, width 3.8 mm.

Genus *Paresmus* Chamberlin

*Paresmus pulaski*

Causey, 1950, Ohio Journ. Sci., vol. 80, p. 271, fig. 9.

Two recent collections of this species, which previously had been known only from Sweet Home, Pulaski Co., Arkansas, provide evidence as to the

variation of important characters. In males collected 5 miles south of Sheridan, Grant Co., the gonopods correspond with those of the holotype, but the margin of the gonopodal opening has only the posteriolateral lobes, the lateral ones of the holotype being absent. The same variation is present in males collected at Boyle State Park, Pulaski Co.; in this collection the telopodites of the gonopods are distinctly hooked and the ends are smooth; proximal to the tooth the dorsal surface is convex. Width of males 6.1 to 6.6 mm., females 5.4 to 6.4 mm.

*Paresmus polkensis*, new species

Figure 4

Near *P. paroicus* Chamberlin 1942; distinguished from that species by the triangular lobes on the posterior margin of the gonopodal opening, the single small process at the end of the telopodite, and the larger size.

*Male holotype.* Dorsum dark olive, the prozonites darker than the metazonites; metazonites with a black middorsal line; keels and medial triangles of metazonites red-orange; legs dark distally; underparts creamy. With the usual outer mandibular processes, two short tubercles on coxae of second legs, and setose areas on sterna between legs 3 through 28. Between the ninth legs the setose areas are in the form of triangular lobes separated by a U-shaped excavation.

Gonopodal opening with sharp medial constriction on anterior margin; margin rises gradually laterad and caudad, forming a pair of triangles on the posterior margin; the entire margin and the caudal surface of the triangles are set with sparse but long setae; the triangles are never as long or as thickly setose as in *E. schmidtii*.

Telopodite of gonopods stout, cylindrical, the end with a sharp process as shown in Figure 4; three rows of long setae on telopodite; the mesial row consists of about 10 setae; the ventral and lateral rows contain many setae and extend almost the full length of the telopodite. As usual, the prefemoral region is thickly setose and the coxal horn occupies the lateral position. *In situ* the ends of the telopodites rest in the excavation between the ninth legs.

*Type locality.* Eleven miles north of Mena, Polk Co., Arkansas; 4 males and several larvae; September 6, 1950. When the same site was visited June 7, 1951, only larvae were found.

*Length* about 41 mm., *width* 6.7 mm.

Suborder POLYDESMIDEA

Family POLYDESMIDAE

Genus *Pseudopolydesmus**Pseudopolydesmus pinetorum*

Figure 5

*Polydesmus pinetorum* Bollman, 1888, Ent. Amer., vol. 4, p. 2, (Myr. N. A., p. 74).

*Polydesmus americanus* J. Carl, 1902, Rev. Suisse Zool., vol. 10, p. 611, pl. 11, fig. 37.

*Polydesmus paroicus* Chamberlin, 1942, Bull. Univ. Utah, vol. 32, no. 8, p. 11, fig. 37, 38.

*Polydesmus hubrichti* Chamberlin, 1943, Ent. News, vol. 54, p. 15, fig. 1, 2.

*Polydesmus modocus* Chamberlin, 1943, Proc. Biol. Soc. Washington, vol. 56, p. 36, fig. 6.

The figure of the distal region of the telopodite of the male gonopod was drawn from a specimen from Little Rock, Arkansas. The subterminal pencil is composed of several setae, as many as **5** or **6**; sometimes they cling together and appear as one larger article. The papillose cushion, not shown in the figure, has **a** small tooth at the base, caudal surface. The coxae of the gonopods do not have the prominent lateral lobe found in *P. serratus*.

As in *serratus* the size varies, with the maximum length about **27** mm. and the most common length **18** or **19** mm.; local populations tend to be of rather uniform size. Aside from the gonopods, *pinetorum* is distinguished from *serratus* by its usually smaller size and the coarser serrations on the lateral margins of the keels.

Specimens have been identified from numerous counties in Arkansas; Lincoln and Evangeline Parishes, Louisiana; Bowie Co., Texas; Adair, Pittsburg, Latimer, Payne, and Cleveland Counties, Oklahoma; Barry and Miller Counties, Missouri; Mason, Macoupin, Randolph, and Pulaski Counties, Illinois.

*Pseudopolydesmus serratus*

*Polydesmus serratus* Say, 1821, J. Acad. Philadelphia, vol. 2, p. 106.

This common eastern species is never abundant west of the Mississippi River. Specimens have been identified from Helena, Phillips Co., Arkansas, Baton Rouge, East Baton Rouge Parish, Louisiana, and Harris Co., Texas.

Genus *Dixidesmus**Dixidesmus erasus*

*Polydesmus erasus* Loomis, 1943, **Bull. Mus. Comp. Zool.**, vol. 92, no. 7, p. 406, fig. 5.

*Dixidesmus humilidems* Chamberlin, 1943, **Bull. Univ. Utah**, vol. 34, no. 6, p. 20, fig. 36.

*D. erasus* has been known previously only from Alabama and Georgia, so it is with some hesitation that the first collection of the genus from Illinois is assigned to this species. One male was collected near Herod, Pope Co., Illinois. Two females from adjoining counties are believed to belong to the species.

*Dixidesmus branneri*

*Polydesmus branneri* Bollman, 1887, **Proc. U. S. Nat. Mus.**, vol. 10, p. 620, (Myr. N. A., p. 37).

*Polydesmus branneri* Bollman. Loomis, 1943, **Bull. Mus. Comp. Zool.**, vol. 92, no. 7, p. 405, fig. 16.

A male from Fayette Co., Kentucky, is in the Illinois collection.

## Family XYSTODESMIDAE

Genus *Apheloria* Chamberlin*Apheloria reducta*

Chamberlin, 1939, **Bull. Univ. Utah**, vol. 30, no. 2, p. 11, fig. 35.

This species has been collected in the following Arkansas counties: Greene, Sharp, Independence, Cleburne, Stone, Searcy, Newton, Johnson, Carroll, Benton, Washington, Logan, Scott, Polk; and from Barry Co., Missouri.

Genus *Mimuloria*, emended

*Mimuloria* Chamberlin, 1928, **Ent. News**, vol. 39, p. 155.

*Castanaria* Causey, 1950, **Chicago Acad. Sci., Nat. Hist. Misc.**, no. 73, p. 1.

The original description read "sternum unspined." Examination of a larval paratype shows that it should be emended to read as follows: Adjacent to each coxa of the second pair of legs of each segment posterior to the sixth segment is a conspicuous sternal spine; a similar but smaller sternal spine is adjacent to the coxae of the first legs of those segments. Near *Nannaria* Chamberlin, differs especially in the medial process of the male gonopods,

which is relatively long and slender in *Nannaria* and shorter, either a simple or bifid process or a triangular lobe in *Mimuloria*. The telopodite ends in a keel or in a simple twist.

*Mimuloria missouriensis*

Figure 6 a

Chamberlin, 1928, Ent. News, vol. 39, p. 155.

The medial process of the gonopod of a male collected at Holmes Cave, Patterson, Wayne Co., Missouri, March 27, 1948, by E. C. Becker, is shown in Figure 6 a. The gonopods are as in *M depalmai* (Causey. 1950) except that there is no aciculate piece on the medial process.

*Mimuloria ohionis*

Figure 6 b

[non] *Fontaria castanea* (McNeill) Williams and Hefner, 1928, Bull. 18, Ohio. Biol. Surv., p. 106, fig. 9 b.

[nomen novum] *Nannaria ohionis* Loomis and Hoffman, 1948, Proc. Biol. Soc. Washington, vol. 61, p. 53.

[non] *Nannaria castanea* (McNeill): Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 4.

The figure of the medial process (Fig. 6 b) was drawn from a paratype kindly loaned by Dr. R. A. Hefner; the telopodite has no keel at the end.

*Mimuloria castanea*

Figure 6 c

*Polydesmus castaneus* McNeill, 1887, Proc. U. S. Nat. Mus., vol. 10, p. 329, pl. 12, fig. 8.

*Nannaria castanea* (McNeill) [partim] Chamberlin, 1949, Proc. Biol. Soc. Washington, vol. 62, p. 4.

The figure of the medial process (Fig. 6 c) was drawn from a specimen collected at Bloomington, Indiana, by R. W. Siegel. The telopodite has a keel at the end as in *missouriensis*, *davidcauseyi*, and *depalmai*.

*Mimuloria terricola*

*Fontaria terricola* Williams and Hefner, 1928, Bull. 18, Ohio Biol. Surv., p. 106, fig. 9 c.

*Nannaria terricola* (Williams and Hefner). Loomis and Hoffman, 1948, Proc. Biol. Soc. Washington, vol. 61, p. 53.

Specimens collected in Grant Co., Indiana, by Dr. C. J. Bushey correspond with the Ohio paratype loaned by Dr. Hefner and the figure accompanying the original description.



*Mimuloria depalmai*

*Castanaria depalmai* (Causey), 1950, Chicago Acad. Sci., Nat. Hist. Misc., no. 73, p. 1, fig. 1.

Specimens collected in the Mark Twain National Forest, Barry Co., Missouri, May 3, 1951, have red-orange keels and black-brown dorsum.

## Family LEPTODESMIDAE

Genus *Trichomorpha* Silvestri*Trichomorpha placida*

*Polydesmus* (*Leptodesmus*) *placidus* Wood, 1864, Proc. Acad. Nat. Sci. Philadelphia (1864), p. 9, 1865, Myr. N. A., p. 225, fig. 56.

*Semionellus placidus* (Wood). Chamberlin, 1920, Proc. Biol. Soc. Washington, vol. 33, p. 97.

*Trichomorpha placida* (Wood). Attems, 1938, Das Tierreich, lfg. 69, p. 119, fig. 139.

*Chonaphe michigana* Chamberlin, 1946, Proc. Biol. Soc. Washington, vol. 59, p. 31, fig. 1, 2.

Recent collections of this species have been made in Dane and Milwaukee Counties, Wisconsin, by Dr. H. W. Levi. A larva of the genus from Rich's Cave, Cobden, Union Co., Illinois, is in the Illinois collection.

## Family PLATYRACHIDAE

Genus *Eutheatus* Attems

*Eutheatus* Attems, 1938, Tierreich, lfg. 69, p. 294, *nom. nov.* for *Euryurus* C. L. Koch, 1847; type species *E. erythropygus* (Brandt, 1841).

*Eutheatus erythropygus*

## Figure 7

*Ibid.*, p. 294, fig. 332; a synonymy is given.

In specimens of this species from Durham, North Carolina, the prefemur of the gonopod is narrow just behind its oblique junction with the femur, while the femur is expanded in that region into a thin medial lobe transvers- ed by the seminal canal; the prong of the femur through which the seminal canal opens is slightly less than twice as long as the other prong; width of males 3.5 mm.

*Eutheatus aculeatus*, new species

## Figure 8

Near *E. falcipes* (Loomis, 1943); differs in having a larger and more complex lobe on the mesial surface of the prefemoral region of the male gonopods.

*Male holotype.* Colors in life unknown; in preservative the posterior corners of the keels and a large spot on the middle of the posterior region of the metazonites are colorless, suggesting a pattern similar to that of *E. erythropygus*.

Prefemur of gonopods just proximad to its oblique junction with the femur expanded medially into a sharp, triangular lobe which is thin and transparent along the margin and thick and setose adjacent to the femur; the seminal canal does not pass into this prefemoral lobe; the prong of the femur through which the seminal canal opens is more than twice as long as the other prong.

Sterna between third and fourth legs with a pair of small conic tubercles as in *E. erythropygus* from North Carolina.

Width **4** mm.

*Type locality.* Giant City State Park, Madison Co., Illinois; two males, one female; April 17, 1949; Dr. H. W. Levi.

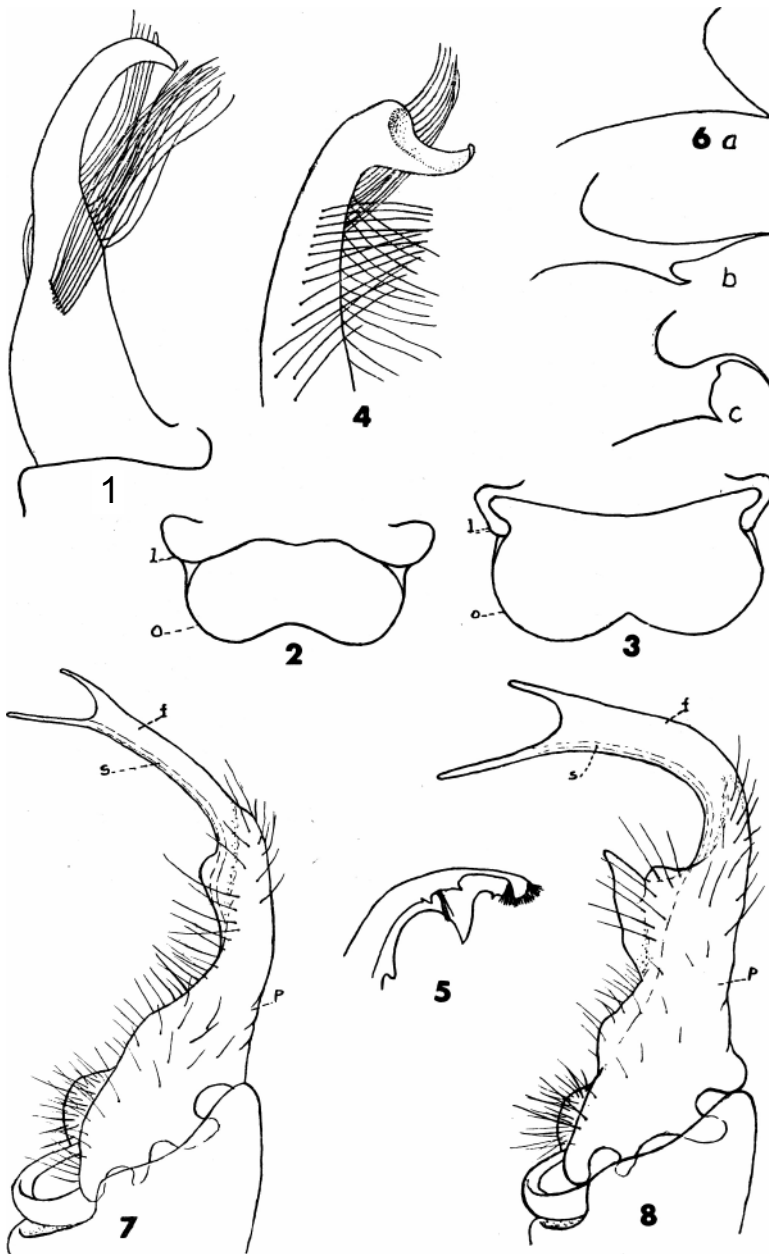
*Female allotype.* Dorsum more convex and anal tergite not so wide distally as in male; width **4.1** mm.; length about **30** mm.

Collections have been made in the following other counties in Illinois: Cook, Jackson, Union, Johnson, and Pope. It has been taken in Grant Co., Wisconsin, by Dr. Levi and at The Shades, Indiana, by Dr. C. J. Bushey; in the Indiana specimens the thickened and setose region of the prefemoral lobe is smaller, but the sharp, transparent region and the femoral prongs are similar to those parts of the holotype.

---

#### Explanations of Figures

1. *Eurymerodesmus goodi*, telopodite of left gonopod of male holotype, medial view, setae omitted on dorsal surface.
2. *Eurymerodesmus hispidipes* (Wood), outline of gonopodal opening (o) and lobes (1) of male.
3. *Eurymerodesmus amplius*, outline of gonopodal opening (o) and lobes (1) of male holotype.
4. *Paresmus polkensis*, end of telopodite of male paratype, lateral view.
5. *Pseudopolydesmus pinetorum* (Bollman), end of telopodite of male, medial view.
6. Medial processes of right male gonopods of *Mimuloria* spp.
  - a. *M. missouriensis* Chamberlin.
  - b. *M. ohionis* (Loomis and Hoffman).
  - c. *M. castanea* (McNeill).
7. *Eutheatus erythropygus* (Brandt), left gonopod, submedial view; s, seminal canal; f, femur; p, prefemur.
8. *Eutheatus aculeatus*, left gonopod of male holotype, submedial view.



*Natural History Miscellanea*, a series of miscellaneous papers more or less technical in nature, was initiated by The Chicago Academy of Sciences in 1946 as an outlet for short, original articles in any field of natural history. It is edited by the Director of the Academy with assistance from the Scientific Governors' Committee on Publications and other qualified specialists. Individual issues, published at irregular intervals, are numbered separately and represent only one field of specialization; e.g., botany, geology, entomology, herpetology, etc. The series is distributed to libraries and scientific organizations with which the Academy maintains exchanges. Title pages and indexes are supplied **to** these institutions when a sufficient number of pages to form a volume have been printed. Individual specialists with whom the Academy or the various authors maintain exchanges receive those numbers dealing with their particular fields of interest. A reserve is set aside for future exchanges and a supply of each number is available for sale at a nominal price. Authors may obtain copies for their personal use at the prevailing rates for similar reprints.

When citing this series in bibliographies and in preparing abstracts, authors are requested to use the following preferred abbreviations : *Chicago Acad. Sci., Nat. Hist. Misc.*

**H. K.** Gloyd, Director

*Committee on Publications:*

Alfred Emerson, Hanford Tiffany, and C. **L.** Turner.